SPACEX

February 28, 2018

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Marlene H. Dortch
Secretary
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, DC 20554

Re: ***Ex Parte Letter***, *GN Docket No. 17-183*

Dear Ms. Dortch:

Space Exploration Holdings, LLC ("SpaceX") is among several companies that have applied for authority to launch and operate non-geostationary satellite orbit ("NGSO") fixed-satellite service ("FSS") constellations for the purpose of providing broadband Internet access in the United States and around the world.[1] For SpaceX and many other NGSO applicants, links between these low-earth-orbiting satellites and ground-based terminals will rely on the Ku-band spectrum where NGSO FSS systems are co-primary with terrestrial wireless at 12.2-12.7 GHz (the "12 GHz band").[2] As SpaceX has commented previously, given the innovation and investment in such NGSO systems, now is precisely the wrong time for the Commission to consider constraining the current co-primary satellite allocations in the 12 GHz band.[3] Accordingly, SpaceX supports four other satellite companies (the "12 GHz Satellite Alliance") in urging the Commission to preserve and protect the 12 GHz band for satellite use.[4]

The 12 GHz band was not among the three spectrum bands identified in the Commission's inquiry into additional opportunities for wireless broadband services in the bands between 3.7 GHz and

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1 *See* IBFS File No. SAT-LOA-20161115-00118.

2 Under the technical and service rules adopted in 2002, MVDDS providers must share the 12 GHz band with NGSO FSS operators on a co-primary basis. *See Amendment of Parts 2 and 25 of the Commission's Rules to Permit Operation of NGSO FSS Systems Co-Frequency with GSO and Terrestrial Systems in the Ku-Band Frequency Range*, 17 FCC Rcd. 9614, ¶ 26 (2002).

3 *See* Space Exploration Technologies Corporation Opposition to Petition for Rulemaking, RM-11768 (June 8, 2016).

4 *See* Letter from Audrey Allison, *et al.* to The Hon. Ajit Pai, GN Docket No. 17-183 (Feb. 3, 2018) ("Alliance Letter"). The 12 GHz Satellite Alliance is composed of WorldVu Satellites Limited, Space Norway AS, Intelsat Corporation, and The Boeing Corporation.

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24 GHz.[5] Nonetheless, a few parties have suggested that this band be considered,[6] echoing an earlier petition for rulemaking filed by the MVDDS 5G Coalition.[7] In this earlier petition, the MVDDS coalition argued that satellite services should be reallocated or made secondary in the 12 GHz band in order to accommodate terrestrial wireless operations in this band. That petition attracted substantial opposition (including from SpaceX[8]), and the record in that proceeding reflects significant and unresolved concerns with the MVDDS proposals.

Given current satellite use of the band and its impending use by multiple next-generation NGSO satellite broadband systems, the 12 GHz band presents a uniquely inappropriate target for reallocation to terrestrial wireless services. Although the Commission has added flexible terrestrial allocations in certain bands that support satellite services, it has been careful to do so only where satellite earth stations are fairly limited in number and individually licensed.[9] Here, by contrast, earth stations will be ubiquitously deployed subject to blanket licenses. This presents a much more complicated spectrum sharing environment. In fact, the MVDDS 5G Coalition has concluded that "coexistence between MVDDS 5G operations and NGSO FSS operations is not possible without severe operational constraints on MVDDS, NGSO FSS or both services."[10] This band does not present an opportunity for flexible spectrum sharing – only for outright repurposing to terrestrial use in derogation of co-primary satellite operations. Accordingly, it has no place in any future rulemaking arising from this *NOI*.

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5 *See Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz*, Notice of Inquiry, 32 FCC Rcd. 6373 (2017) ("*NOI*").

6 *See generally* Alliance Letter at 2 n.4 (listing comments).

7 *See* Petition of MVDDS 5G Coalition for Rulemaking, RM-11768 (Apr. 26, 2016) ("MVDDS Petition").

8 *See supra* note 3.

9 *See, e.g., Use of Spectrum Bands Above 24 GHz for Mobile Radio Services*, 32 FCC Rcd. 10988, ¶¶ 54, 189 (2017) (adopting mobile allocation for band with individually-licensed earth station but declining to do so for band to be used for widely deployed NGSO FSS end user devices).

10 Comments of the MVDDS 5G Coalition, RM-11768, Attachment I at 35 (June 8, 2016). *See also* MVDDS Petition at 23 ("Nor does it appear that concurrent sharing of spectrum between co-primary 5G and NGSO FSS operations is even viable in the band.").

NGSO satellite systems now under development are being designed to make intensive use of valuable spectrum resources while providing high-speed, low-latency broadband services throughout the U.S., including for remote and underserved areas of the country. The 12 GHz band will be a crucial component for the end-user links of such NGSO networks. Accordingly, SpaceX supports the 12 GHz Satellite Alliance's call for the Commission to reject any proposal that could undermine the 12 GHz band as a robust and reliable band for satellite services.

Sincerely yours,

Patricia Cooper
Vice President of Satellite Government Affairs

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